Value of Data and Online Platforms

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The views expressed are those of the author and do not necessarily reflect those of the U.S. Bureau of Economic Analysis.
Data Value Chain

Value-added activities

Data Collection → Data Storage → Data Analytics → Data-driven Business Model

Source: Li et al. (2018, 2019)
E-commerce Platform

Source: Li et al. (2018, 2019)
Online Sharing Platform

1. Data:
   - Clickstreams, purchases, locations, and reviews
   - Number of Listed Properties: 28.9 million
   - Number of Destinations: 137,791
   - Number of Countries: 229

2. Value Creation:
   - Pricing strategy, demand forecast, access to one of the world’s largest online travel markets, and other data targeting services
   - Help reduce the inventory of highly perishable goods or monetize underutilized rooms

3. Value Capture:
   - Commissions/shared revenues (15%), and data targeting services revenue
   - 2017 US $11.8 billion (reservation sales); over 1.5 million rooms reserved per night
   - Advertising and other revenues < 7% of total sales

Source: Li et al. (2018, 2019)
Fintech Platform

Source: Li et al. (2018, 2019)
The Creation of the Value of Data

Source: Li et al. (2018, 2019)
BigTech’s Business Models vs. Global Data Flow: Highly Correlated!

Data:
• Selling, general and administrative (SG&A) expenditures [Eisfeldt and Papanikolaou, 2013]

Methodologies:
1. Forward looking profit model for depreciation [Li and Hall, 2020]
2. Stock of Data-driven Business Model [Hall, 1993]

Source: Li et al. (2020)
Note: Big Tech companies include Microsoft, Amazon, Apple, Google, Facebook, Alibaba, and Tencent.
BigTech’s Business Models vs. Global Data Flow: Growth Rates

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